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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,781

09/29/2006

Lufan Yu

1991.76173

7133

24978

7590

12/12/2007

GREER, BURNS & CRAIN

300 S WACKER DR

25TH FLOOR

CHICAGO, IL 60606

EXAMINER

TRAN, THUY V

ART UNIT

PAPER NUMBER

2821

MAIL DATE

DELIVERY MODE

12/12/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/594,781

Applicant(s)

YU ET AL.

Examiner

Thuy V. Tran

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

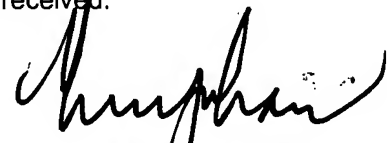
- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 07/30/2007.

- 4) ☐ Interview Summary (PTO-914)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.



THUY V. TRAN

PRIMARY EXAMINER

### **DETAILED ACTION**

This Office Action is in response to the Applicants' communication filed on 09/29/2006 and preliminary amendment concurrently filed therewith. In virtue of this amendment, claims 1-5 are currently presented in the instant application.

#### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 07/30/2007 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Drawings Objections***

3. The drawings are objected to because of the following informalities:
  - (i) connection nodes are not clearly shown (they should be darkened for easy recognition); and
  - (ii) same designated reference numbers "6" for both "lamp" and "one of terminals" of the transformer (correction should be made to the specification correspondingly).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections/ Minor Informalities***

4. Claim 1 is objected to because of the following informalities:

Claim 1, line 6, "inputs" should be changed to --an input--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Zelina et al. (U.S. Patent No. 4,459,516; hereinafter "Zelina").

With respect to claim 1, Zelina discloses, in Fig. 1, an electronic ballast with life-ended protection comprising a rectifier [27] and filter circuit [21], a DC/AC inverter circuit [11, 12], and a resonant circuit [17, 22]; an input of the rectifier [27] and filter circuit [21] being connected to an outside power supply [120 VAC], an output of said rectifier and filter circuit being connected to an input (inputs as claimed) of the DC/AC inverter circuit [11, 12], an output of the DC/AC inverter circuit [11, 12] being connected to inputs of resonant circuit [17, 22], and an output of the resonant circuit [17, 22] being connected to a lamp [55], a feedback driver circuit [14, 15, 16] and a filament current loop [62, 63, 64, 65, 19, 20, 21] connected to the lamp [55] at an input (via [17]) of said feedback driver circuit [14, 15, 16], an input of the feedback driver circuit [14, 15, 16] being connected to the filament current loop [62, 63, 64, 65, 19, 20,

21], an output of said feedback driver circuit being connected to a control terminal (at bases [35, 43]) of the DC/AC inverter circuit, electrical signals of the filament current loop controlling the DC/AC inverter circuit to drive the resonant circuit through the feedback driver circuit.

With respect to claim 2, Zelina discloses, in Fig. 1, that the feedback driver circuit further includes a feedback drive transformer [14, 15, 16] connected to the lamp filament current loop at a primary winding of said transformer [14] and to the input of the DC/AC inverter circuit at a secondary winding [15, 16] of said transformer.

***Allowable Subject Matter***

7. Claims 3-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- An electronic ballast with life-ended protection further including a lamp filament capacitor circuit having a filament capacitor loop connected to one end of the lamp at its input and to the input of the feedback driver circuit at its output, in combination with the remaining claimed limitations as called for in claim 3;
- An electronic ballast with life-ended protection further including a filament capacitor loop used for a lamp filament capacitor circuit includes a capacitor and a thermal resistor in parallel, an input of the filament capacitor loop is connected to one end of the lamp, an output of said loop is connected to the primary winding of a feedback drive transformer, an output of a primary winding is connected to another end of the

lamp, a secondary winding of the feedback drive transformer is connected for providing a drive power to bases of two triodes of the DC/AC inverter circuit, respectively, in combination with the remaining claimed limitations as called for in claim 4; and

- An electronic ballast with life-ended protection further including a filament capacitor loop used for a lamp filament capacitor circuit includes a capacitor and a thermal resistor in parallel, an input of the filament capacitor loop is connected to one end of the lamp, an output of said loop is connected to the primary winding of the feedback drive transformer, an output of the primary winding is connected to the other end of the lamp, the secondary winding of the feedback drive transformer is connected for providing a drive power to bases of two triodes of the DC/AC inverter circuit, respectively, in combination with the remaining claimed limitations as called for in claim 5.

***Citation of relevant prior art***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Prior art Adamson (U.S. Patent No. 6,088,249) discloses a ballast with loosely coupled transformer; and

Prior art Moisin et al. (U.S. Patent No. 5,583,402) discloses a symmetry control circuit and method.

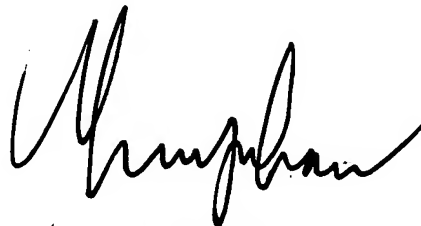
***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -4:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

12/09/2007

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', is written over a light gray grid background.

**THUY V. TRAN  
PRIMARY EXAMINER**